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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/611,270

07/06/2000

Akihiro Oishi

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07/28/2004

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EXAMINER

DANG, DUY M

ART UNIT

PAPER NUMBER

2621

DATE MAILED: 07/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/611,270

Applicant(s)

OISHI, AKIHIRO

Examiner

Duy M Dang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 May 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-23 is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/4/04 has been entered.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the claimed features in last three lines that of "encoding means for encoding the input motion data by selected encoding parameter" is considered vague and indefinite because it is unclear to what it refers to. This assumption seems to be consistent with Applicant's disclosed on page 3 of the specification that of "encoding parameter such that a predetermined number of codes are used for encoding the input motion-image data". If otherwise, please clarify.

Regarding claims 11-12, it is noted that these two claims recite similar features as called for in claim 1 above. Thus, claims 11-12 are also rejected for the same reasons as above.

Claims 2-10 depend from claim 1 and are rejected for the same reasons as set forth in claim above.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, 5-6, and 9-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Reininger et al. (US Patent No. 5,426,463).

Regarding claim 1, Reininger teaches an image coding apparatus (i.e., the “compression system” generally shown in figure 2 and mentioned in col. 2 lines 11-13 functions as the so called “image coding apparatus”) comprising:

input means for inputting motion-image data (see “video input” shown at 2 in figure 1 and 10 in figure 2 and mentioned in col. 6 lines 33-34);

control means (see “processor” shown at 27 of figure 2) for outputting an encoding parameter (i.e., the “quantization factor” outputted from “p MEM” comprised in processor 27 to quantization 14 corresponds to the so called “encoding parameter” according to figure 2 and col. 7 lines 35-37) such that an amount of code provided when the input motion-image data is encoded in units of predetermined sizes is a predetermined amount of code (see col. 2 line 48 to col. 3 line 53. Note that the “8x8 blocks” (col. 2 line 51, for example) corresponds to the so called “units of predetermined size”, the “target bit allocation  $R_j$ ” (col. 3 line 24) corresponds to the so called “amount of code”, and the “target  $R_{GOP}$ ” (col. 2 line 67 and shown in equation 2 in col. 3) corresponds to the so called “predetermined amount of code”);

storage means for storing an encoding parameter (see the “quantization table” or “q MEM” disclosed at item 27 of figure 2 and mentioned in col. 7 lines 35-37 for storing quantization factor which corresponds to the so called “encoding parameter”);

selecting means for selecting the encoding parameter output from said control means or the encoding parameter stored in said storage means [the selection of the quantization factors mentioned in col. 4 line 11 and lines 27-50 (note the different quantization factor is selected for encoding different type of frame namely I/P/B frames and these quantization factors are stored in the look-up tables shown in figures 4-6)]; and

encoding means for encoding the input motion-image data input by using the selected encoding parameter (see “encoder” generally shown in figure 2 and mentioned in col. 6 lines 15-16. Note that the video signal input at 10 in figure 2 corresponds to the so called “motion-image data” according to col. 6 lines 33-34. The so called “selected encoding parameter” is met by the quantization factor stored in “q MEM” in processor 27. Note that this quantization factor is selected from look-up table shown in figures 4-6 and mentioned in col. 4 lines 26-50)

Regarding claim 2, Reininger further teaches wherein said encoding means encodes a predetermined number of frames of the input motion-image data (see the “GOP” mentioned in col. 2 line 68 and col. 3 lines 5-21) from the top (Note that this claimed features are inherently included in Reininger because it is how encoder performs i.e., encoding the first I frame of GOP refers to encode the motion data from the top because: I-frame refers to the background or DC part of the GOP that is located at the upper left corner of the image data block in two-dimension representation) by the use of the encoding parameter output from said control means (see ‘quantization factor’ stored in quantization table or q-MEM according to item 27 of figure 2 and

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col. 7 lines 35-37) and encodes the subsequent frames of the input motion-image data by the use of the encoding parameter stored in said storage means (i.e., encoding P and B frames subsequently according to col. 3 lines 19-20).

Regarding claim 3, Reininger further teaches comprising detecting means for detecting a change between frames of the input motion-image data (see item 12 (subtraction) shown in figure 2 functions as the so called “detecting means” because it is how subtraction performs), wherein said selecting means selects an encoding parameter according to the output of the detecting means (The selection of the quantization factor from tables shown in figures 4-6 (note that each table represent the quantization factor for each type of frame namely I/P/B frames).

Regarding claim 5, Reininger further teaches wherein said encoding means adaptively selects an intra-encoding mode or an intra-encoding mode to encode the motion-image data (see “intraframe” and “interframe” mentioned in col. 2 lines 40-42) .

Regarding claim 6, Reininger further teaches wherein said encoding means forcedly executes the intra-encoding mode at a predicted period (.see “intraframe” mentioned in col. 2 lines 40-42).

Regarding claim 9, Reininger further teaches wherein said encoding means comprises quantization means for quantizing the motion-image data (see “quantization” shown at 14 of figure 2 and mentioned at col. 6 lines 39-40), wherein the quantization parameter of the quantization means is used as the encoding parameter (see “quantization factor” mentioned in col. 7 lines 35-37).

Regarding claim 10, Reininger further teaches wherein said encoding means executes encoding conforming to the MPEG-1 or MPEG-2 standard (see "MPEG encoding" mentioned in col. 5 line 50, and col. 2 lines 31-36).

Regarding claim 11, it is noted that claim 11 is a method claim and recites the similar features called for in claim 1 above. Thus, claim 11 is rejected for the same reasons as set forth in claim 1 above.

Regarding claim 12, it is noted that claim 12 recites the similar features called for in claim 11 above except the features of a program. Thus, the advanced statements as applied to claim 11 above are incorporated herein. Reininger further teaches using a program (see col. 6 line 58 to col. 7 lines 3).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reininger et al. (US Patent No. 5,426,463) in view of Stevens (US Patent No. 6,111,609).

The advanced statements as applied to claim 1 with regard to Reininger above are incorporated herein.

Regarding claim 4, While Reininger further teaches wherein said input means comprises capture means for capturing an object (i.e., the "video data" mentioned in col. 5 line 52 and col. 56 line 34 inherently includes an object) and detecting means detects a change of the input

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motion-image data (see item 12 (subtraction) shown in figure 2 functions as the so called “detecting means” because it is how subtraction performs), Reininger does not teach a camera parameter of the capture means. Such features are well known in the art as evidenced by Stevens for example.

Stevens, in the same field of invention that of encoding video signals generated by a camcorder or video camera (see col. 1 line 44 and figure 1), teaches: (1) the “Record pause condition provides the user with the ability to change the recorded scene” (col. 3 lines 23-25), and (2) “detect motion” (col. 2 line 39). Thus, these teachings by Stevens corresponds to the so called “camera parameter”.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the conventional teachings as taught by Stevens in combination with Reininger because by including a camcorder having such features would greatly enhance the video signals output thereby speed up the encoder by reducing the unwanted object presented in video signal before such video signal is being to be encoded.

Regarding claim 7, Stevens further teaches at least one of a change of white balance (see col. 1 line 36-37), a change of the iris (see col. 1 lines 24-25), and a change of zooming (see col. 1 line 24).

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reininger et al. (US Patent No. 5,426,463) in view of Matsunoshita (US Patent No. 5,608,654).

The advanced statements as applied to claim 1 with regard to Reininger above are incorporated herein.



Regarding claim 8, Reininger fails to explicitly teaches comprising recording means for recording the motion-image data encoded by said encoding means, into a recording medium. However, such utilizing a recording medium for recording encoded data is well known in the art as evidenced by Matsunoshita for example.

Matsunoshita, in the field of invention that of image coding (see figure 1), teaches a image recording medium for recording the encoded data (see "image recording medium" shown at 4 of figure 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the recording medium for recording encoded data as taught by Matsunoshita in combination with Reininger in order to reserve the data, help transferring encoded data to decoder system in case of lack communication means, and easily distributing the encoded data among other system in the networking environment.

***Allowable Subject Matter***

9. Claims 13-23 are allowed.

10. The following is an examiner's statement of reasons for allowance:

Regarding claim 13, the cited prior art (Reininger) fails to teaches or suggest an image encoding apparatus, comprising: an input device for inputting motion-image data; a quantizer for quantizing the inputted motion-image data, based on quantization coefficient information applied to an input of said quantizer; an encoder for encoding image data quantized by said quantizer to output corresponding encoded image data including a number of codes; a rate control circuit for determining whether or not the number of codes included in the encoded image data exceeds a predetermined I threshold value, and for outputting a selected one of a plurality of first sets of

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quantization coefficients, based on a result of that determination; a memory storing a plurality of second sets of quantization coefficients; and a selector for selecting either the first set of quantization coefficients output by said rate control circuit or one of the second sets of quantization coefficients stored in said memory, and applying the selected set of quantization coefficients to the input of said quantizer, to cause said quantizer to quantize the inputted motion-image data, based on that selected set of quantization coefficients.

Claims 14-21 are also allowed as being dependent upon the allowed based claim 13.

Regarding claims 22-23, it is noted that claims 22-23 recite similar features called for in claim 13. Thus, claims 22-23 are also allowed for the same reasons as set forth in claim 13 above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### ***Response to Arguments***

11. Applicant's arguments filed 5/4/04 have been fully considered but they are not persuasive.

In reply to Applicant's arguments, see page 12 last paragraph to page 13 first 4 lines, with regard to claims 1, 11-12, it is noted that Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. In this case, the patent to Reininger et al. teaches the

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claimed features as recited in the instant claims 1 and 11-12. Thus, the rejection section applied to claims 1 and 11-12 in paragraph 5 above are incorporated herein.

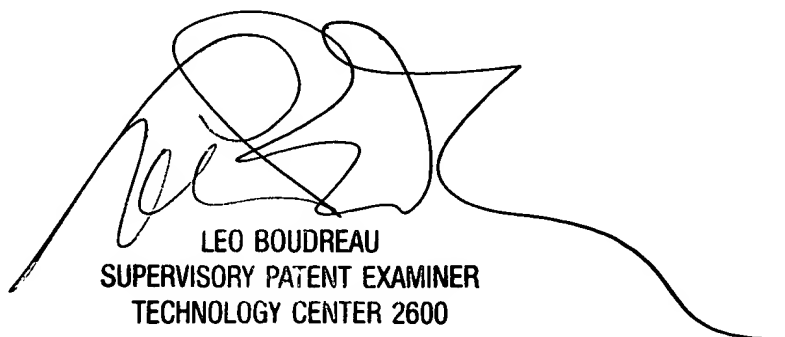
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duy M Dang whose telephone number is 703-305-1464. The examiner can normally be reached on Monday to Thursday from 6:30AM to 5:00PM..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo H Boudreau can be reached on 703-305-4706. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*LMH*

7/21/04



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